



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,625	09/04/2003	Frank Dawidowsky	282723US8X	7983
22850	7590	11/08/2010		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
FOUD, HICHAM B				
ART UNIT		PAPER NUMBER		
2467				
NOTIFICATION DATE		DELIVERY MODE		
11/08/2010		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com

oblonpat@oblon.com

jgardner@oblon.com

### Office Action Summary

**Application No.**

10/656,625

**Applicant(s)**

DAWIDOWSKY ET AL.

**Examiner**

HICHAM B. FOUD

**Art Unit**

2467

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 August 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 and 15-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 15-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/GS/US)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

1. The amendment filed on 08-24-2010 has been entered and considered.

Claims 1-12 and 15-17 are pending in this application.

Claims 13-14 are cancelled.

Claims 1-12 and 15-17 remain rejected as discussed below.

**Claim Rejections - 35 USC § 103**

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vogel et al (US 7,130,283), hereinafter referred to as Vogel in view of Elwalid et al (US 6,567,415), hereinafter referred to as Elwalid and Benveniste (US 2002/0163933).

For claim 1, Vogel discloses a method to allocate bandwidth, which method is implemented at a central controller of a network (see col.3 lines 5-10 and Figure 1 element 420; bandwidth manager), comprising: allocating, at the central controller, a fixed amount of bandwidth to a certain connection requiring a certain quality of service (QOS) (see column 6 lines 4-18; UT 220 of Fig.1 get allocated "Full Allocation" that satisfy a specific data rate "full rate" (claimed QOS) and the amount is fixed because it

cannot go over it "full BW allocation"), wherein an owner of the certain connection is a requesting terminal which is a terminal of the network (see Figure 1 and see column 6 lines 4-18, UT 220 requesting the bandwidth through the reverse/backward/return communication channel); freeing, at the central controller, a certain amount of the allocated fixed amount of bandwidth as freed bandwidth (see Figure 1, bandwidth manager and see column 6 lines 5-18 and/or column 6 line 61 to column 7 line 2; release the full bandwidth to minimum or no bandwidth (unused bandwidth)), the freed bandwidth being a difference between the allocated fixed amount of bandwidth and a needed amount of bandwidth (see column 6 lines 5-18 and/or column 6 line 67 to column 7 line 1; releasing (freeing) full bandwidth since no data in buffer to transmit), wherein the needed amount of bandwidth is determined at the requesting terminal and transmitted to the central controller, and does not exceed the fixed amount of bandwidth (see column 6 lines 5-18 and/or column 7 lines 16-19; UT sends the full-to-minimum bandwidth transition request, wherein the full is the fixed allocated BW and minimum is the needed BW); when the requesting terminal transmits a request for a new needed amount of bandwidth greater than said new amount of bandwidth (see column 6 lines 5-18 and/or col.7 lines 20-26; in case of more packets in the buffer, the UT sends a countermanding request in column 6 lines 5-18 and/or column 7 lines 39-42; the transition from minimum to full BW), the new needed amount of bandwidth not exceeding said fixed amount of bandwidth (column 6 lines 5-18 and/or column 7 lines 39-42; the transition from minimum to full BW (the BW requested does not exceed full BW), immediately returning as much of the freed bandwidth as required so that said

new needed amount of bandwidth is available to the requesting terminal to secure the certain QOS (see column 6 lines 5-18 and/or column 7 lines 39-42; the transition from minimum to full BW to secure clearing buffers from building up (secure the QOS)).

Vogel discloses all the subject matter with the exception of explicitly disclosing allocating the freed BW to a non-QOS connection. However, Elwalid discloses allocating the freed BW to a non-QOS connection (see column 6 lines 46-49; the allocation of unused BW from QOS connections to non-QOS connections (best effort)). Thus, it would have been obvious to the one skill in the art at the time of the invention to use the allocation method of unused BW to non-QOS connections of Elwalid into method of Vogel for the purpose of maximizing the BW available to best effort traffic (non-QOS connections) while satisfying the guaranteed of the QOS classes (see col.3 lines 15-18).

Vogel in view of Elwalid discloses all the subject matter with the exception wherein the network is an ad-hoc network. However, Benveniste discloses that an ad-hoc network can be defined as the IEEE 801.11 wireless LAN network where the stations communicate directly with each other (see [0033] lines 1-9 and line 11). Thus, it would have been obvious to the one ordinary skill in the art at the time of the invention to use the teaching of Benveniste (an ad-hoc network) into the method of Vogel in view of Elwalid for the purpose of having the advantage of adding quickly new devices and benefiting from all the advantages of the ad-hoc network.

For claim 2, Elwalid discloses a method characterized by allocating some or all of the freed bandwidth to another connection, the another connection being a connection

without a fixed amount of allocated bandwidth (see column 6 lines 46-49; the allocation of unused BW from QOS connections to non-QOS connections (best effort)). And, Benveniste discloses the ad-hoc network (see [0033] lines 1-9).

For claim 3, Vogel discloses a method wherein the requesting terminal is operated by reserving a fixed amount of bandwidth for providing a certain quality of service for the connection and the method further comprises: determining, in the requesting terminal, a filling status of the transmit queue which indicates how much sending data is in the transmit queue (see column 7 lines 1-49; requested BW depends on filling status of the buffer), determining, in the requesting terminal, the needed amount of bandwidth as bandwidth needed in a next transmission frame, the needed amount of bandwidth depending on the filling status of the transmit queue and not exceeding the fixed amount of bandwidth (see column 7 lines 1-49; requested BW depends on filling status of the buffer), and transmitting, from the requesting terminal, the needed amount of bandwidth to the central controller (see column 7 lines 1-49; the transmission of the transition BW request).

Claim 4 is rejected for same reasons as claims 1 and 3.

Claim 5 is rejected for same reasons as claim 1.

Claims 16 and 17 are rejected for same reasons as claim 2.

For claims 6, 9, 11 and 12, Benveniste discloses that ETSI HIPERLAN/2 is the European counterpart to the American 802.11a with QOS features (see [0017]). Thus it would have been obvious to the ordinary skill in the art at the time of invention to modify the network as taught by Vogel and Elwalid to an ad hoc network operated according to

the ETSI HIPERLAN/2 standard for the purpose of the direct communication of the terminals without a network controller or base station and using the ETSI HIPERLAN/2 standard so it can operate in Europe.

Claim 7 is rejected for same reasons as claim 1.

For claim 8, Vogel discloses a central controller characterized by a transmit queue for buffering sending data (see column 7 lines 1-49; buffer), and a monitoring means for monitoring the filling status of the transmit queue and indicating the needed amount of bandwidth, which depends on the filling status of the transmit queue, to the bandwidth freeing means or bandwidth re-allocations means (see column 7 lines 1-49; requested BW depends on filling status of the buffer).

Claim 10 is rejected for same reasons as claims 7 and 8.

For claim 15, Vogel further discloses a method wherein the freed bandwidth is re-allocated in a next transmission frame (see column 7 lines 1-49; the allocation of the unused bandwidth is for the next transmission frame).

### **Response to Argument**

3. Applicant's arguments filed have been fully considered but they are not persuasive.

In pages 9-12 of the Remarks, the applicant is arguing four points.

First of all, the applicant is arguing different embodiment than what is used by the examiner. The examiner is using the "Full Allocation when loaded" mode in the Vogel reference and not the argued "Dedicated Allocation for dedicated services".

Second of all, the applicant is arguing that the "Full Allocation when loaded" mode depends on data in the input buffers and that is different than what is claimed. However, the examiner strongly disagrees because claim 1 is broad and does not specify the dependency of the increasing of the requested bandwidth (BW). Moreover, claim 3 which depends on claim 1 clearly discloses that the allocation of BW (requesting more BW) depends on filling of transmit queue (buffers) which is the same thing as what is disclosed in Vogel and cited by the examiner.

Third of all, the applicant is arguing different embodiment than what is used by the examiner. Furthermore, the "Load Based Shutdown" works with the "Full Allocation when loaded" mode (see col.6 line 61 to col.7 line 4) for the purpose of saving wasted BW. Also, the argued freeing BW can be clearly seen in Vogel col.6 lines 5-18.

Finally, Vogel clearly discloses allocating, at the central controller, a fixed amount of bandwidth to a certain connection requiring a certain quality of service (QOS) (see column 6 lines 4-18; UT 220 of Fig.1 get allocated "Full Allocation" that satisfy a specific data rate "full rate" (claimed QOS) and the amount is fixed because it cannot go over it "full BW allocation"), wherein an owner of the certain connection is a requesting terminal which is a terminal of the network (see Figure 1 and see column 6 lines 4-18, UT 220 requesting the bandwidth through the reverse/backward/return communication channel); freeing, at the central controller, a certain amount of the allocated fixed amount of bandwidth as freed bandwidth (see Figure 1, bandwidth manager and see column 6 lines 5-18 and/or column 6 line 61 to column 7 line 2; release the full bandwidth to minimum or no bandwidth (unused bandwidth)), the freed bandwidth being a difference



between the allocated fixed amount of bandwidth and a needed amount of bandwidth (see column 6 lines 5-18 and/or column 6 line 67 to column 7 line 1; releasing (freeing) full bandwidth since no data in buffer to transmit). Thus, Vogel clearly discloses the argued limitations.

### ***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. **Examiner's Note:** Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed

by the Examiner. In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

When responding to this office action, applicants are advised to clearly point out the patentable novelty which they think the claims present in view of the state of the art disclosed by the references cited or the objections made. Applicants must also show how the amendments avoid such references or objections. See 37C.F.R 1.111(c). In addition, applicants are advised to provide the examiner with the line numbers and pages numbers in the application and/or references cited to assist examiner in locating the appropriate paragraphs.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HICHAM B. FOUAD whose telephone number is (571)270-1463. The examiner can normally be reached on Monday - Friday 10-6 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pankaj, Kumar can be reached on 571-272-3011. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. B. F./  
Examiner, Art Unit 2467  
/Pankaj Kumar/  
Supervisory Patent Examiner, Art Unit 2467